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Title: Request for Compute Infrastructure to Support the Strategies and Techniques for Analyzing Microbial Population Structures (STAMPS) at the Marine Biological Laboratory in Woods Hole, MA, USA, 2022

Abstract:
Currently, our society as a whole is generating data much faster than it is developing the skills to work with it, as it takes time for our educational infrastructure to catch up with what is needed. This leaves many biologists struggling to develop bioinformatics skills that are rapidly becoming essential, with little or no guidance or expertise available to them. The STAMPS course has been a yearly event at the Marine Biological Laboratory (MBL) in Woods Hole, MA, USA for over a decade, helping nearly 1,000 learners establish a foundation in bioinformatics over the years. In the past, the course has been typically run using the MBL computational infrastructure, but this has been problematic for several reasons. A few of the faculty involved with STAMPS have been and are also involved with other ~2-week long workshops that have utilized XSEDE/Jetstream to great success (C. Titus Brown, and the submitting PI for this request, Michael D. Lee). And the last year we ran the course, 2019, we were fortunate enough to receive computational support from XSEDE, and it made things run smoother than ever. We are submitting this education request to hopefully support this year's STAMPS course too, taking place over 21-July to 30-July-2022. All materials developed and presented at the course are openly available.

Keywords: Microbial ecology, Bioinformatics

Field of science: Ecology

Allocation end date: 2022-08-05

Disclosure of access to other computer resources:

We do not have other resources available at this time to support the computational needs of this workshop.

Compute:

Indiana Jetstream2

Amount requested: 230,400 SUs

Comments: *The total request is for 230,400 service units (6 cores * 24 hrs/day * 16 days * 100 instances).*

Indiana Jetstream2 Storage

Amount requested: 10,000 GB

Comments: *To help accommodate any potentially large size data files, an additional 100 GB of storage volumes are requested for each instance. Persistent storage beyond the end of the course (30-July-2022) is not required.*

Syllabus, resource justification, and CV documents uploaded